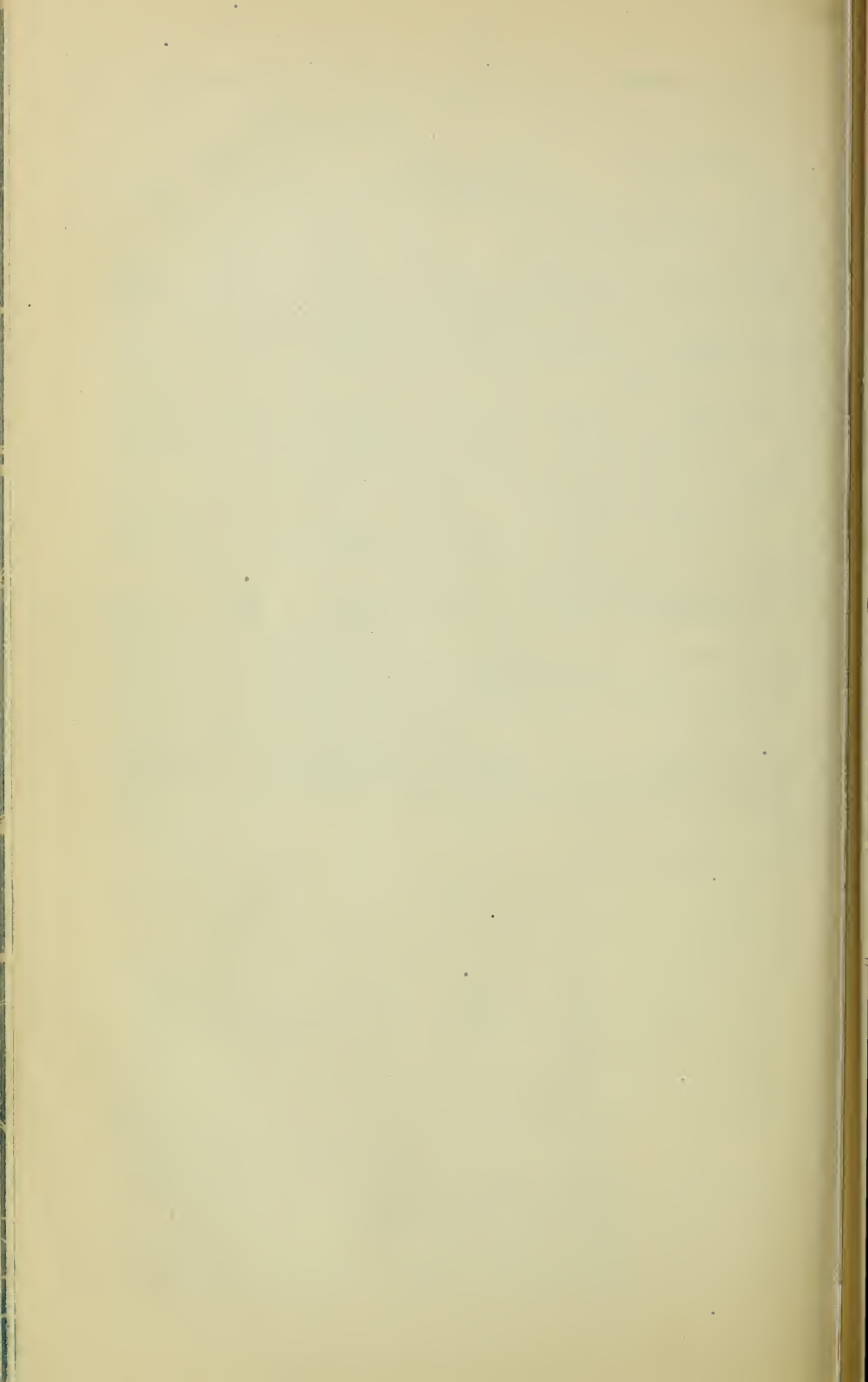
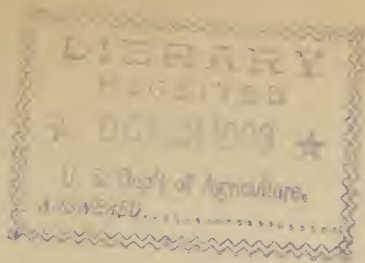


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Issued September 30, 1908.

U. S. DEPARTMENT OF AGRICULTURE.

BUREAU OF STATISTICS—CIRCULAR 17.

CHAS. C. CLARK, Acting Chief.

GOVERNMENT CROP REPORTS:

THEIR VALUE, SCOPE, AND PREPARATION.

COMPILED AND PREPARED BY

CHAS. C. CLARK, Associate Statistician.

ORGANIZATION OF BUREAU OF STATISTICS.

Statistician and Chief: VICTOR H. OLMSTED.

Associate Statistician: CHARLES C. CLARK.

Assistant Statistician: NAT. C. MURRAY.

Chief Clerk: SAMUEL A. JONES.

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Division of Foreign Markets: GEORGE K. HOLMES, *Chief*.

Editorial Division and Library: CHARLES M. DAUGHERTY, *Chief*.

Crop Reporting Board:

Chairman, VICTOR H. OLMSTED, *Statistician and Chief of Bureau*.

Four other members chosen each month from the following:

CHARLES C. CLARK, *Associate Statistician*.

NAT. C. MURRAY, *Assistant Statistician*.

GEORGE K. HOLMES, *Chief of Division of Foreign Markets*.

One or more persons called in from the corps of special field agents
and State statistical agents.

[Cir. 17]

LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF STATISTICS,
Washington, D. C., September 1, 1908.

SIR: I have the honor to transmit herewith a paper entitled "Government Crop Reports," and to recommend its publication as Circular 17, of this Bureau. This material has been prepared at different times during the past two years by Victor H. Olmsted, chief statistician; Charles C. Clark, associate statistician; and Nat C. Murray, assistant statistician of this Bureau; and I have arranged it in the present convenient form so as to meet numerous inquiries as to the value, methods, and scope of the crop-reporting service of this Department.

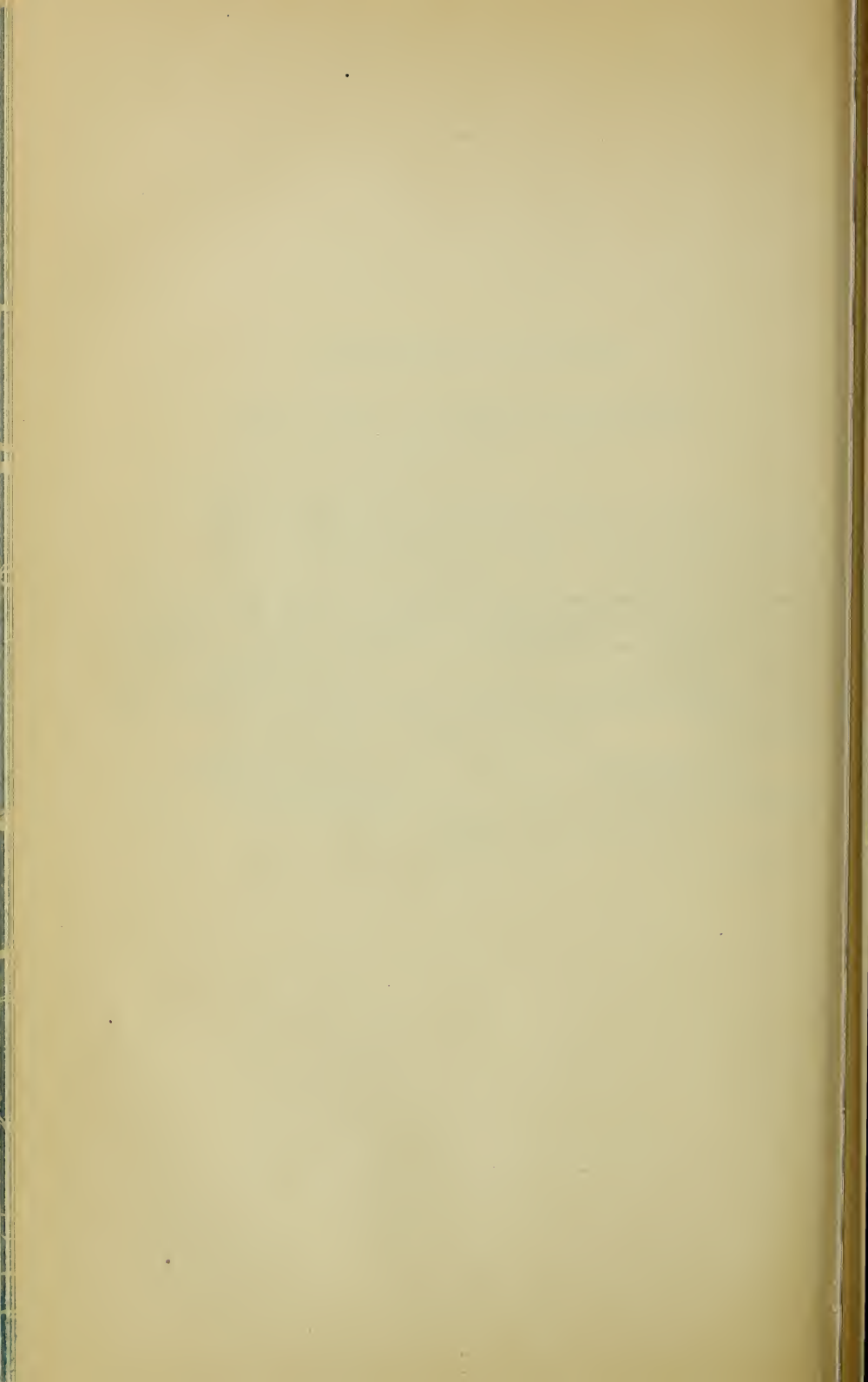
Very respectfully,

C. C. CLARK,
Acting Chief of Bureau.

Hon. JAMES WILSON,
Secretary of Agriculture.

[Cir. 17]

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[Cir. 17]

GOVERNMENT CROP REPORTS: THEIR VALUE, SCOPE, AND PREPARATION.

VALUE OF GOVERNMENT CROP REPORTS.

Prices of agricultural products are primarily governed by the law of supply and demand; therefore early information concerning the supply is of value to all. Those who produce and those who consume are vitally interested as well as the dealer who stands between them. The mutual relations and interests of agriculture, industry, commerce, and labor demand that there should be published at brief intervals during the crop season reliable information on the condition, acreage, production, and value of the principal crops, by States and agricultural areas.

Foreign countries depend to a large and increasing extent upon the United States for agricultural products. To meet the market demands at home and abroad is the mission of American agriculture. The manufacturer, the merchant, the mechanic, the skilled operative in the factory, in fact, all who consume the products of American agriculture, whether at home or abroad, are interested in the monthly Government reports of conditions on the farms of the United States.

As commerce consists largely in an exchange of the products of agriculture and manufacture among their respective producers, commerce thrives as the farmer and the factory operator prosper. Some individuals, however, do not always regard the common welfare, and injurious commercial speculations occur when ignorance prevails concerning the condition of our crops and the true relations of supply and demand. At such times the farmer often does not obtain just prices, while the consumer derives no benefit and business is injuriously affected. The consequences of false reports concerning the condition and prospective yield of the cotton crop alone may be very damaging. If there were no adequate Government crop-reporting service, and by misleading reports speculators should depress the price a single cent per pound, growers would lose \$60,000,000 or more; if prices were improperly increased, manufacturers and allied interests would be affected to a proportionate degree.

The Government crop reports are especially valuable to farmers, who are benefited by them both directly and indirectly. Those farmers who read the reports and thus keep informed as to condition and prospects of crops profit in a direct way, while all are indirectly benefited through this knowledge being imparted to the great body

of progressive and intelligent farmers and dealers instead of remaining the exclusive possession of a few persons.

It is well known that speculators and large dealers in farm products do not depend entirely upon Government reports for information concerning crop conditions. They have traveling agents and correspondents (usually local buyers) throughout the United States, who keep them posted upon local conditions, and the large buyer or speculator in return gives to these local buyers or correspondents information in regard to general conditions. Local buyers know the conditions of crops in their vicinity better, as a rule, than the average farmer, because it is their business to keep well informed. The farmer can not, by refusing to report for his locality the condition of crops, prevent buyers or speculators from knowing the condition of the crop. But without the Government crop reports, which are made up largely by and for him, the farmer could not be sure of receiving any equivalent information from a disinterested source. He may know very well the condition of crops in his own locality, but must depend upon reports of others, in the newspapers or elsewhere, for the conditions of the entire crop. Prices in his home market are influenced, as a rule, more by the condition of the whole crop than by local conditions. The entire wheat crop of his county may be destroyed and prices be low, if the entire crop is large, or his county may have a "bumper" crop and prices be very high, if the entire crop is short.

Some private crop reports published in newspapers are honestly prepared and more or less reliable; on the other hand, misleading crop reports are frequently sent throughout the country to affect prices in the interest of speculators. The average farmer does not know which reports are reliable and which are sent out to mislead. The Government reports enable farmers to keep themselves informed as to the general conditions, while the wide publicity given them checks and limits the evils of false reports sent out by persons interested in forcing the prices of products to figures not justified by actual conditions.

The more certainty there is as to the supply of and demand for a crop the less hazard or speculation there is in the business of distributing the crop, to the benefit, in the long run, of both producer and consumer.

Large manufacturing firms and agricultural implement or hardware companies, who neither buy nor sell farm products, are much interested in the prospects and conditions of crops. This knowledge enables them to distribute their wares more economically by sending large consignments to sections where crops are good and farmers have the power to buy, and less to sections of crop shortage where

there is obviously less demand. Few farmers realize how much is saved by the even distribution of wares which they buy from a knowledge of crop prospects. By this saving, farmers in the long run are benefited.

It is important to railroad companies to know the probable size of crops in the country in order to provide sufficient cars. The more nearly they can learn the size of the crops the better able are they to move them economically and promptly. Here, again, in the long run, farmers are indirectly benefited by the cheaper distribution of the crop, due to better information of crop conditions.

Under modern trade regulations and conditions, prompt and reliable information regarding agricultural areas, prospects, and yields is also an important factor in the proper conduct of commercial, industrial, and transportation enterprises. The earlier the information regarding the probable production of the great agricultural commodities can be made public, the more safely can the business of the country be managed from year to year.

Retail dealers in all lines of goods, whether in city or country, order from wholesale merchants, jobbers, or manufacturers the goods they expect to sell many weeks, frequently months, before actual purchase and shipment. Jobbers follow the same course, and manufacturers produce the goods and wares handled by merchants of every class far ahead of their actual distribution and consumption.

For example, retail shoe dealers place their orders in summer for shoes to be sold during the fall, winter, or following spring months. Wholesale shoe dealers and jobbers, similarly, order from manufacturers the particular qualities and styles of shoes indicated by the orders of the retail dealers in such quantities as the orders show to be necessary. The manufacturers, constantly receiving these orders, adjust, as closely as they can, their purchases of material, employment of operatives, and quantity of output so as to enable them to supply the quantity of shoes which have been or are likely to be ordered, their aim being, on the one hand, to meet fully and promptly the requirements of trade (in other words, the demand of the purchasing public) and, on the other hand, to avoid such overproduction as will result in a large surplus unsalable except at a loss.

The same ideas and rules prevail throughout every branch of trade, commerce, and transportation, the shoe business being simply an example of other lines of business in the matter of "doing things in advance."

Now, it is universally conceded that farming—agriculture—is the basic industry upon which all other industries greatly depend. The measure of the country's crops is to a large extent the measure of the country's prosperity, and the purchasing power of the people is

increased or diminished as the crops are bountiful or meager. Therefore the commercial interests of the country are vitally affected by the quantity and quality of the crops; and it becomes a matter of vast importance to them to know "in advance" what the crop prospects are during the growing season and what the output is at harvest.

With such information carefully and scientifically gathered and compiled, and honestly disseminated, so that it can be depended upon as being as reliable as any forecast or estimate can possibly be, and relied upon as emanating from an impartial and disinterested source, the merchants and manufacturers of the country can certainly act with a degree of prudence and intelligence not possible were the information lacking.

If reports show, during the growing season, that the condition of wheat is such as to indicate a full crop on a large area, the merchants of the wheat-producing sections of the country know that they can give liberal orders for goods to be handled by them several weeks or months later; the manufacturers, located far from the wheat fields, know where there will be a large demand for such of their products as are used by all dependent upon the wheat industry; the railroad companies know they will have heavy freights to transport; and so the advance knowledge regarding the probable future outcome of the crop serves as a guide to every branch of commerce and trade connected with the wheat-growing areas of the country. The same is true as to the other crops—corn, cotton, oats, rye, tobacco, etc.

If, on the other hand, the condition of growing crops is unfavorable, reliable information to that effect is equally, in fact more, important to trade and commerce than when the promise is good. For, when conditions are unfavorable, the merchants, manufacturers, and transporters must move with a degree of caution not necessary when the prospects are highly encouraging.

It was to remedy the evils and to subserve and protect the interests of all, as above noted, that Congress provided for issuing monthly crop reports, and the crop-reporting service of the Department of Agriculture aims to supply the public at large with impartial, unbiased information regarding crop areas, conditions, and yields which, it must be apparent, is highly essential and beneficial not only to farmers, but also, equally, to our commercial interests of every kind and class.

ORIGIN OF THE CROP-REPORTING SERVICE.

The first enactment authorizing the collection of agricultural statistics by the Department of Agriculture was the act, passed May 15, 1862, establishing the Department, "the general design and duties of which shall be to acquire and to diffuse among the people of the United States information on subjects connected with agricul-

ture, in the most general and comprehensive sense of that word." The Commissioner was required by this act to "procure and preserve all information concerning agriculture which he can obtain by means of books, correspondence, and by practical and scientific experiments, accurate records of which experiments shall be kept in his office, by the collection of statistics, and by any other appropriate means within his power."

The first appropriation for collecting agricultural statistics by the Department was provided for by the act of February 25, 1863, which was made in bulk for the work of the Department, amounting in all to \$90,000. The then Commissioner of Agriculture allotted a part of this amount for collecting agricultural statistics, and appointed a statistician for that purpose. For the fiscal year ended June 30, 1865, the first distinct and separate provision was made for collecting agricultural statistics for information and reports, and the amount of \$20,000 was appropriated.

From an allotment of a few thousand dollars each year at first the crop-reporting service has been evolved, perfected, and enlarged into the Bureau of Statistics of this Department.

The appropriation act for the Department of Agriculture for the fiscal year ended June 30, 1908, carried appropriations of about \$220,000 for the Bureau of Statistics, and for the current year the appropriation has been increased to about \$222,000. As the appropriations for the statistical and crop-reporting service have been gradually increased during the past several years, the field service and organization of the Bureau have been correspondingly enlarged.

METHODS OF CROP REPORTING.

The Bureau of Statistics issues each month detailed reports relating to agricultural conditions throughout the United States, the data upon which they are based being obtained through a special field service, a corps of State statistical agents, and a large body of voluntary correspondents composed of the following classes: County correspondents, township correspondents, individual farmers, and special cotton correspondents.

The special field service consists of seventeen traveling agents, each assigned to report for a separate group of States. These agents are especially qualified by statistical training and practical knowledge of crops. They systematically travel over the district assigned to them, carefully note the development of each crop, keep in touch with best informed opinion, and render written and telegraphic reports monthly and at such other times as required.

There are forty-five State statistical agents, each located in a different State. Each reports for his State as a whole, and maintains

a corps of correspondents entirely independent of those reporting directly to the Department at Washington. These State statistical correspondents report each month directly to the State agent on schedules furnished him. The reports are then tabulated and weighted according to the relative product or area of the given crop in each county represented, and are summarized by the State agent, who coordinates and analyzes them in the light of his personal knowledge of conditions, and from them prepares his reports to the Department.

There are approximately 2,800 counties of agricultural importance in the United States. In each the Department has a principal county correspondent who maintains an organization of several assistants. These county correspondents are selected with special reference to their qualifications and constitute an efficient branch of the crop-reporting service. They make the county the geographical unit of their reports, and, after obtaining data each month from their assistants and supplementing these with information obtained from their own observation and knowledge, report directly to the Department at Washington.

In the townships and voting precincts of the United States in which farming operations are extensively carried on the Department has township correspondents who make the township or precinct the geographical basis of reports, which they also send directly to the Department each month.

Finally, at the end of the growing season a large number of individual farmers and planters report on the results of their own individual farming operations during the year; valuable data are also secured from 30,000 mills and elevators.

With regard to cotton, all the information from the foregoing sources is supplemented by that furnished by special cotton correspondents, embracing a large number of persons intimately concerned in the cotton industry; and, in addition, inquiries in relation to acreage and yield per acre of cotton are addressed to the Bureau of the Census's list of cotton ginneries through the courtesy of that Bureau.

SCOPE OF CROP REPORTS.

Beginning with the planting, data are gathered and reports made as to the condition and acreage of each of the principal agricultural products, such as corn, wheat, oats, rye, barley, potatoes, hay, cotton, tobacco, rice, etc. As the crops progress the prospects are reflected in monthly condition reports upon each growing crop; such reports being expressed in percentages, 100 representing a normal condition. A normal condition of 100 would be the condition of the plant where it gives promise of such a crop as might be expected if the plant were not subjected to damaging influences, but grew bountifully and under

favorable conditions, including favorable weather, freedom from damaging insects, etc. A "normal crop" is not a crop which might be raised by exceptional skill or by an exceptional farmer, but such a crop that, planted and cultivated, will be produced if not subjected to damaging influences. At harvest time the yields per acre are ascertained, which, being multiplied by the acreage figures already ascertained, give the production or quantitative figures for the year.

Eleven monthly reports on the principal crops are received yearly from each of the special field agents, county correspondents, State statistical agents, and township correspondents, and one report relating to the acreage and production of general crops annually from individual farmers.

Six special cotton reports are received during the growing season from the special field agents, from the county correspondents, from the State statistical agents, and from township correspondents, and the first and last of these reports are supplemented by returns from individual farmers, special correspondents, and cotton ginners.

The general reports for January and February are combined on one schedule and relate to the number and value of farm animals.

The general report for March relates to the stock of grain in farmers' hands, the distribution and consumption of corn, wheat, and oats, and the average natural weight per bushel of the wheat and oats crop of the previous year.

Reports on the condition of the crops each year begin with the April report, when the condition of winter wheat and rye, prevailing diseases of farm animals, and losses from disease and exposure are dealt with.

The report for May comes at a time when few of the crops are sufficiently advanced for their condition to be reported upon; consequently the inquiries relative to condition apply only to winter wheat, rye, meadow lands, and spring pasture. This schedule also deals with the portion, if any, of the original acreage sown to winter wheat that for any reason has been or will be abandoned, and contains inquiries with regard to farm labor and tenants.

The schedule for June deals with the acreage of six crops, the most important of which is spring wheat. It also covers the condition of wheat, oats, barley, rye, clover, spring pastures, apples, peaches, and rice.

The July schedule deals with the acreage of corn, potatoes, tobacco, and sugar cane; the stocks of wheat in farmers' hands; the average condition of all the principal crops, fruits, and spring pastures, and the average weight of wool per fleece.

The August schedule deals with the average yield of winter wheat per acre, acreage of buckwheat and hay, the condition of the prin-

cial crops, the quality of clover hay, and the stocks of oats in farmers' hands.

The September schedule deals with the condition, when harvested, of wheat, oats, barley, and rye; the acreage of clover seed; the production of peaches, and the number and condition of stock hogs on hand for fattening.

The October schedule deals with the average yield per acre and the quality of spring wheat, barley, oats, rye, and hops, and the condition of corn, potatoes, sugar cane, tobacco, rice, and apples.

The November schedule deals with the average yield per acre of corn, buckwheat, potatoes, hay, tobacco, and rice.

The December schedule deals with the production and farm prices of all the principal crops, the acreage of winter wheat and rye sown for the crop of the following year, and with the condition of winter wheat and rye.

In addition to the foregoing the reports during the past two years have been extended to include condition figures of many small fruits, vegetables, and minor products. Information in regard to such products has been urgently requested, and as a basis for comparison has now been satisfactorily established the reports are received with interest and favorable comment.

TRANSMISSION OF REPORTS TO BUREAU BY CORRESPONDENTS.

Previous to the preparation and issuance of the Bureau's reports each month, the correspondents of the several classes send their reports separately and independently to the Department at Washington.

In order to prevent any possible access to reports which relate to speculative crops, and to render it absolutely impossible for premature information to be derived from them, all of the reports from the State statistical agents, as well as those of the special field agents, are sent to the Secretary of Agriculture in specially prepared envelopes addressed in red ink with the letter "A" plainly marked on them. By an arrangement with the postal authorities these envelopes are delivered to the Secretary of Agriculture in sealed mail pouches. These pouches are opened only by the Secretary or Assistant Secretary, and the reports, with seals unbroken, are immediately placed in the safe in the Secretary's office, where they remain sealed until the morning of the day on which the Bureau report is issued, when they are delivered to the Statistician by the Secretary or the Assistant Secretary. The combination for opening the safe in which such documents are kept is known only to the Secretary and the Assistant Secretary of Agriculture. Reports from special field agents and State statistical agents residing at points more than 500 miles from Washington are sent by telegraph, in cipher. Those in regard to speculative crops are addressed to the Secretary of Agriculture.

Reports from the State statistical agents and special field service in relation to nonspeculative crops are sent in similar envelopes marked "B" to the Bureau of Statistics and are kept securely in a safe until the data are required by the Statistician in computing estimates regarding the crops to which they relate. The reports from the county correspondents, township correspondents, and other voluntary agents are sent to the Chief of the Bureau of Statistics by mail in sealed envelopes.

PREPARATION OF REPORTS.

The reports from the different classes of individual correspondents received by the Department are tabulated and compiled and the figure for each separate State arrived at. After the reports from the different counties are tabulated a true weighted figure for the State is secured by taking into consideration the relative value which the total acreage or production of each county in the State bears to the total acreage or production of the State. The weighted figure showing the value of the county is applied to the acreage, yield per acre, or condition, whichever it might be, and from the totals of the weights and the extensions a weighted average for the State is ascertained.

The work of making the final crop estimates each month culminates at sessions of the Crop-Reporting Board, composed of five members, presided over by the Statistician and Chief of Bureau as chairman, whose services are brought into requisition each crop-reporting day from among the statisticians and officials of the Bureau, and special field and State statistical agents who are called to Washington for the purpose.

The personnel of the Board is changed each month. The meetings are held in the office of the Statistician, which is kept locked during sessions, no one being allowed to enter or leave the room or the Bureau, and all telephones being disconnected.

When the Board has assembled, reports and telegrams regarding speculative crops from State and field agents, which have been placed unopened in a safe in the office of the Secretary of Agriculture, are delivered by the Secretary, opened, and tabulated; and the figures, by States, from the several classes of correspondents and agents relating to all crops dealt with are tabulated in convenient parallel columns; the Board is thus provided with several separate estimates covering each State and each separate crop, made independently by the respective classes of correspondents and agents of the Bureau, each reporting for a territory or geographical unit with which he is thoroughly familiar.

Abstracts of the weather condition reports in relation to the different crops, by States, are also prepared from the weekly bulletins

of the Weather Bureau. With all these data before the Board, each individual member computes independently, on a separate sheet or final computation slip, his own estimate of the acreage, condition, or yield of each crop, or of the number, condition, etc., of farm animals for each State separately. These results are then compared and discussed by the Board under the supervision of the chairman, and the final figures for each State are decided upon.

The estimates by States as finally determined by the board are weighted by the acreage figures for the respective States, the result for the United States being a true weighted average for each subject. Thus, the figures for the United States are not straight averages, which would be secured by dividing the sum of the State averages by the number of States; but each State is given its due weight in proportion to its productive area for each crop.

METHOD OF ISSUING REPORTS.

Reports in relation to cotton, after being prepared by the Crop-Reporting Board, and personally approved by the Secretary of Agriculture, are issued on the first or second day of each month during the growing season, and reports relating to the principal farm crops and live stock on the seventh or eighth day of each month. In order that the information contained in these reports may be made available simultaneously throughout the entire United States, they are handed, at an announced hour on report days, to all applicants and to the Western Union Telegraph Company and the Postal Telegraph Cable Company, who have branch offices in the Department of Agriculture, for transmission to the Exchanges and to the press. These companies have reserved their lines at the designated time, and forward immediately the figures of most interest. A mimeograph or multigraph statement, also containing such estimates of condition or actual production, together with the corresponding estimates of former years for comparative purposes, is prepared and sent immediately to Exchanges, newspaper publications, and individuals. The same day printed cards containing the essential facts concerning the most important crops of the report are mailed to the 77,000 post-offices throughout the United States for public display, thus placing most valuable information within the farmer's immediate reach.

Promptly after the issuing of the report, it, together with other statistical information of value to the farmer and the country at large, is published in the Crop Reporter, an eight-page publication of the Bureau of Statistics, under the authority of the Secretary of Agriculture. An edition of over 120,000 copies is distributed to the correspondents and other interested parties throughout the United States each month.